EXPRESS MAIL number ET 537 672 476 US deposited October 31, 2001, I hereby certify that this paper or fee is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" service 37 under CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

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DT-6016

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT	:	Rainer Treptow
SERIAL NO.	:	Not Yet Known
FILED	:	Concurrently
FOR	:	Method and apparatus for Tempering Specimens
EXAMINER	:	-- Group : --

Commissioner for Patents
Washington, D.C. 20231
BOX: Patent Application

PRELIMINARY AMENDMENT

Sir:

Please amend the above-identified application before Action as follows:

In the Claims:

Cancel claims 4 through 33 without prejudice.

Add claims 34-63 as follows:

34. The method according to claim 1, wherein the particles contain at least one metal.

35. The method according to claim 2, wherein the plastic material contains polyethylene and/or polypropylene and/or polycarbonate.

36. The method according to claim 1, wherein at least one wall of the specimen carrier (1, 15) defining a memory location and/or a memory volume (5, 15) for the specimen or a portion or layer thereof is made of the plastic-based electrically conductive material.

37. The method according to claim 1, wherein the specimen carrier (1, 14) is integrally made of one or more plastic materials.

38. The method according to claim 1, wherein the specimen carrier (1, 14) is moulded in a single-component or multi-component injection molding process.

39. The method according to claim 1 wherein the specimen carrier (1, 14) comprises a pipette tip and/or a syringe and/or a cuvette and/or a reaction vessel and/or a centrifugating vessel and/or a microtitration plate and/or a test band and/or a bio-chip.

40. The method according to claim 1, wherein the specimen carrier (1, 14) is a device having a contact area for putting on and tempering another specimen carrier that directly contains the specimen.

41. The method according to claim 1, wherein the specimen carrier (1, 14) comprises electric contacts and/or electric printed conductors and/or electronic components.

42. The method according to claim 1, wherein the heating and/or cooling of the specimen is controlled by the composition of the electrically conductive material and/or the shape given to the specimen carrier (1, 14) and/or by applying a certain current and/or a certain course of current at certain points and/or by applying several certain currents and/or courses of current at several certain points and/or by applying certain voltage and/or a certain course of voltage at certain points and/or by applying several certain voltages and/or courses of voltage at several certain points and/or by using a cooling apparatus.

43. The method according to claim 1, wherein the heating and/or cooling of the specimen is determined by installing at least one temperature sensor (11) in the specimen and/or integrating at least one temperature sensor in the specimen carrier (1, 14) and/or at least one optical temperature sensor

and/or by determining the internal resistance of the specimen carrier (1, 14).

44. The method according to claim 1, wherein the specimen carrier (1, 14) is applied to by at least one direct current and/or at least one alternating current and/or at least one direct voltage and/or at least one alternating voltage.

45. The method according to claim 1, wherein the specimen is further treated and/or transported and/or stored on the same specimen carrier (1, 14) prior to and/or during and/or after heating.

46. The method according to claim 1, wherein the volume of the specimen is capacitively measured on the specimen carrier (14).

47. The method according to claim 46, wherein at least one capacitive measuring sensor (17) of the specimen carrier (14) which is associated with a memory location and/or a memory volume (15) for a specimen is connected to a capacitance measuring circuit for a capacitive measurement.

48. The method according to claim 47, wherein capacitor plates (17) formed by the plastic-based electrically conductive material of which the

specimen carrier (14) is partially made are connected to the capacitance measuring circuit for a capacitive measurement.

49. The method according to claim 1, wherein the specimen carrier (14) is contacted by means of electrically conductive needles (20) in order to apply the electric current/the electric voltage to the specimen carrier (14) for resistance heating and/or to connect the capacitance measuring circuit to the capacitive measuring sensor (17).

50. The method according to claim 1, wherein the specimen carrier (1,14) is discarded after use and/or is cleaned and/or is re-used.

51. A apparatus for tempering at lease one sample comprising

- a specimen carrier (1, 14) made of a plastic-based, at least partially conductive material for at least one specimen, and

- a device (6, 7, 9) for applying an electric current and/or an electric voltage to the plastic-based electrically conductive material in order to cause a resistance heating of at least some part of the plastic-based electrically conductive material, which heating heats a specimen disposed on the specimen carrier (1, 14).

52. The apparatus according to claim 51, wherein at least one wall of the specimen carrier (1, 14) defining a memory location and/or a memory volume (5, 15) for the specimen or a portion or a layer thereof is made of the plastic-based electrically conductive material.

53. The apparatus according to claim 51, wherein the specimen carrier (14) has at least one capacitive measuring sensor (17) associated with a memory location and/or a memory volume (15) for a specimen to measure the volume of the at least one specimen and a capacitance measuring circuit connected to the capacitive measuring sensor (17).

54. The apparatus according to claim 51, wherein the capacitive measuring sensor has capacitor plates (17) which are formed from a plastic-based electrically conductive material of which the specimen carrier (14) is partially made.

55. The apparatus according to claim 51, wherein the specimen carrier (1, 14) is made of one or more integrally interconnected plastic materials.

56. The apparatus according to claim 51, wherein the specimen carrier (1, 14) and the devices (6, 7, 9) for applying an electric current and/or an electric voltage and/or the capacitance measuring circuit have electric contacts (8, 9) via which at least one electric current and/or an electric voltage can

be applied to the specimen carrier (1, 14) and/or is adapted to be connected to the capacitive measuring sensor (17) via the capacitance measuring circuit.

57. the apparatus according to claim 51, wherein the devices (6, 7, 9) for applying an electric current and/or an electric voltage and/or the capacitance measuring circuit are adapted to be connected to the specimen carrier (1, 14) via a needle bed adapted (19).

58. The apparatus according to claim 51, which has an apparatus portion which comprises the device (6, 7, 9) for applying an electric current and/or an electric voltage and/or the capacitance measuring circuit and/r the needle bed adapter (19) and is separable from the specimen carrier (1, 14).

59. The apparatus according to claim 51, wherein the separable apparatus portion (6, 7, 9) is stationary and/or portable.

60. The apparatus according to claim 58, wherein the separable apparatus portion (6, 7, 9) comprises a pipetting device and/or a proportioning device and/or a spectrometer and/or a device for treating reaction vessel and/or for treating centrifuge vessel and/or for treating microtitration plates.

61. The apparatus according to claim 51, wherein the device (6, 7, 9) for applying an electric current and/or an electric voltage has a direct-current source and/or an alternating-current source and/or a direct voltage and/or an alternating-current source.

62. The apparatus according to claim 51, wherein the specimen carrier (1, 14) and/or the device (6, 7, 9) for applying an electric current and/or an electric voltage have one or more temperature measuring devices (11, 12, 13).

63. The apparatus according to claim 51, wherein the device (6, 7, 9) for applying an electric current and/or an electric voltage has a device for controlling the heating of the specimen.

REMARKS

The present Preliminary Amendment eliminates multiple dependence of claims.

Respectfully submitted,

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